

# Blood loss and knee function after unicompartamental knee replacement or total knee replacement surgery

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		<input type="checkbox"/> Protocol
<b>Registration date</b> 06/04/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 06/04/2020	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Knee replacement, also known as knee arthroplasty, is a surgical procedure to replace the weight-bearing surfaces of the knee joint to relieve pain and disability. It is most commonly performed for osteoarthritis, and also for other knee diseases such as rheumatoid arthritis and psoriatic arthritis.

Unicompartamental knee arthroplasty (UKA) is a surgical procedure used to relieve arthritis in one of the knee compartments in which the damaged parts of the knee are replaced. UKA surgery may reduce post-operative pain and have a shorter recovery period than a total knee arthroplasty (TKA) procedure.

Utilization of tourniquet is considered to compromise the outcome of knee arthroplasty. This study aims to evaluate the hidden blood loss and function restoration of UKA without tourniquet by comparing with total knee arthroplasty (TKA).

### Who can participate?

Adults over 18 years, scheduled to undergo UKA or TKA

### What does the study involve?

This study is a retrospective analysis of patient records looking at patients who underwent UKA or TKA without tourniquet.

### What are the possible benefits and risks of participating?

None.

### Where is the study run from?

Department of Orthopedic Surgery, The First People's Hospital of Huzhou, Huzhou (China)

### When is the study starting and how long is it expected to run for?

August 2017 to December 2019

Who is funding the study?

Department of Orthopedic Surgery, the Second Affiliated Hospital, School of Medicine, Zhejiang University (China)

Who is the main contact?

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## Contact information

### Type(s)

Public

### Contact name

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### Protocol serial number

2019035

## Study information

### Scientific Title

Blood loss and knee function after unicompartmental knee arthroplasty (UKA) without tourniquet

### Acronym

BLAKFAUKAWT

### Study objectives

1. UKA or TKA without tourniquet results in lower blood loss compared to with tourniquet.
2. UKA without tourniquet results in less HBL compared with TKA
3. UKA without tourniquet enjoys a better outcome than TKA

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Approved 06/06/2019, Medical Ethics Committee of The First People's Hospital of Huzhou (The First People's Hospital of Huzhou, 158 Guangchang Back Rd, Wuxing District, Huzhou, 313000, China; +86 (0)572 2508930; hzyllwyh@163.com), ref: 2019035

### **Study design**

Single-center retrospective controlled study

### **Primary study design**

Observational

### **Study type(s)**

Treatment

### **Health condition(s) or problem(s) studied**

Osteoarthritis

### **Interventions**

In this retrospective study, patients were included from August 2017 to October 2018. Both the UKA group and the TKA group underwent procedure without the utilization of tourniquet during the whole process.

The gender, age, body mass index, American Society of Anesthesiologists score, Kellgren-Lawrence grade, perioperative Hb, and volume of hidden blood loss (HBL) were recorded and analysed.

Knee function was assessed at 3 months and 12 months after the procedure by using HSS score.

### **Intervention Type**

Procedure/Surgery

### **Primary outcome(s)**

1. Mean volume of HBL during the procedure (ml)
2. Knee function assessed at 3 months and 12 months after the procedure by HSS score

### **Key secondary outcome(s)**

Hb level measured using blood test on the 2nd day, 4th day, 6th day, 8th day postoperatively

### **Completion date**

30/12/2019

## **Eligibility**

### **Key inclusion criteria**

1. Primary UKA or TKA
2. Kellgren-Lawrence (KL) grade of medial knee osteoarthritis grade

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

112

**Key exclusion criteria**

1. Preoperative abnormality in coagulation function, hematonosis history
2. Postoperative poor general situation
3. More than 2000ml per day in fluid infusion
4. Simultaneous bilateral UKA or TKA, and UKA or TKA secondary to a failed arthroplasty procedure

**Date of first enrolment**

01/08/2017

**Date of final enrolment**

30/10/2018

**Locations****Countries of recruitment**

China

**Study participating centre****Department of Orthopedic Surgery**

The First People's Hospital of Huzhou

158 Guangchang Back Rd

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Huzhou

China

313000

**Sponsor information**

**Organisation**

The First People's Hospital of Huzhou

**Funder(s)****Funder type**

Hospital/treatment centre

**Funder Name**

Zhejiang University School of Medicine, Second affiliated hospital

**Results and Publications****Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

**IPD sharing plan summary**

Available on request